

KANSAS DEPARTMENT OF TRANSPORTATION
OF OPERATIONS

SPECIFICATIONS
FOR
POTHOLE PATCHER, AIR BLOWN TYPE

The following specifications and dimensions shall apply to purchases of POTHOLE PATCHER, AIR BLOWN TYPE for the Kansas Department of Transportation. The KDOT reserves the right to waive minor technicalities under this specification. Federal and State laws supersede any conflicting part of this specification.

The unit shall be a current model, new and unused, under standard production by the manufacturer, and of which parts are stocked at one or more locations in Kansas or Greater Kansas City. The requirement for parts to be stocked at locations in Kansas or Kansas City may be waived if the bidder provides an alternative parts availability plan acceptable to the Agency. **ALTERNATIVE PARTS AVAILABILITY PLANS MUST BE APPROVED PRIOR TO CLOSING OF BID.** All parts utilized on the unit shall be new and unused.

The bidder agrees, if his proposal is accepted, to guarantee the design, material and workmanship of the unit bid according to the standard factory warranty, on for one year from date of acceptance, whichever is greater. A copy of the warranty shall accompany the bid. Warranty coverage shall include costs of transporting the unit to and from dealer's shop, when outside a 150 mile radius of the delivery point.

Complete specifications and literature on the unit bid shall accompany the bid. Any exceptions to these specifications shall be indicated on the bid or on a separate attachment to the bid, labeled as such.

Any "or equal" or "equivalent" items for brand specified components shall be listed with the bid package. Complete description and literature on the "or equal" components shall be supplied for consideration by the KDOT. The burden of proof regarding "or equal" items will be upon the vendor.

PRE-DELIVERY SERVICE: The unit shall be **delivered complete and fully operational.** It shall be properly serviced, free of leaks, and all mechanical adjustments made prior to delivery. A minimum of **three days notice prior to delivery** shall be given to the person to which the unit is to be shipped.

FILTERS: A complete set of replacement filters shall be provided with each unit. Upon award of the bid the successful bidder shall supply a completed KDOT "Equipment Information" sheet listing all the pertinent details that are specific to the units being purchased. Failure to do so will result in 2% retention of the total order

TECHNICAL SERVICE: The services of a competent technician, thoroughly trained in the use, operation and servicing of the unit, shall be furnished for a minimum period of one working day for each delivery point. The technician shall instruct the KDOT personnel in the proper use, safety, operation and preventive maintenance of the unit and to test the unit for satisfactory performance. This instruction shall be performed on a date to be agreed upon by the District Engineer.

PRINTED MANUALS: One operators manual shall be supplied with each unit. Sets of manuals shall be delivered to each delivery point in quantities shown on the **Request for Quotation**. Sets shall consist of the following: safety manual, shop manual, parts manual, wiring diagram, and operators manual. The manuals shall fully and clearly cover all components of the unit, including motors, drive systems, safety features, and attachments. Shop manual shall explain, in detail, procedures for overhauling the engine, transmission and differential. Failure to provide manuals may result in retention of 5 percent of total bid amount.

GENERAL DESCRIPTION: The purpose of this specification is to provide a trailer mounted pavement patching machine that will incorporate the following three functions: First, it shall provide compressed air for blowing debris from pothole. Second, hot asphalt emulsion shall be fed into air stream for preparing repair area with a hot tack coat. Third, clean aggregate coated with asphalt emulsion shall be shot into repair area at a minimum rate of 50 cubic feet per hour. This process shall provide a patch that will not require rolling or tamping. The unit shall be capable of being operated by a two-man crew.

ITEM: POTHOLE PATCHER, AIR BLOWN TYPE

SHOW MFG. & MODEL OFFERED _____

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
PAINT: _____	 _____	All painted surfaces to be properly primed and painted. The manufactures standard factory paint will be acceptable with orange being the preferred color.
TRAILER: _____	 _____	The trailer portion of unit shall be built to safely transport the machine components at highway speeds.

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
TRAILER (Continued):		
_____	_____	The trailer shall be equipped with springs, wheels and tires to handle the gross weight of the unit. A torsion type suspension is acceptable.
_____	_____	The trailer shall come with a 5,000 lb. capacity screw type jack with retractable metal foot, capable of being locked in the upright and stored position, for use when the trailer is not connected to the towing unit.
_____	_____	The axle system of the trailer shall have a minimum capacity rating of 12,000 pounds.
_____	_____	The trailer shall comply with Federal Motor Carrier Safety Regulations and the Motor Vehicle Laws of the State of Kansas.
_____	_____	Properly sized safety chains shall be installed for breakaway protection.
_____	_____	The unit shall be equipped with the required safety decals and signage.
_____	_____	A 3 inch pintle eye type hitch shall be provided. The hitch height shall be adjustable from approximately 18 to 30 inches from the ground.
_____	_____	The tongue length ahead of the platform shall be long enough to allow an acceptable turning radius.
_____	_____	A lockable steel tool box shall be attached to the trailer.
_____	_____	The trailer shall be equipped with fenders and running lights. The unit shall have a safety strobe light and two combination stop, turn and tail lights. A lighted license plate bracket shall also be included.

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
TRAILER (Continued):		
_____	_____	The trailer shall be equipped with hydraulic surge brakes and a breakaway brake application system.
_____	_____	A wiring harness shall be provided for connection of the lighting system to the towing vehicle. Each wire shall be labeled as to its function, i.e., left turn, stop, etc. Wiring shall be insulated and enclosed in a fibrous or plastic loom or a flexible conduit, and be routed inside the trailer frame or housing so as not to interfere with moving parts. Harness shall be of sufficient length to permit attachment of a seven-way connecting plug (Cole-Hersee #1255 or equivalent) to the towing vehicle.
AGGREGATE FEEDER:		
_____	_____	Aggregate from the truck to the hopper on the patcher shall be by gravity feed through a flexible hose.
_____	_____	An air-powered gate which is controlled by a switch at the operators handle shall supply clean aggregate from the hopper to the hose.
_____	_____	Unit will handle aggregate up to 2 1/2" without clogging.
DIESEL FLUSH TANK:		
_____	_____	The diesel flush tank shall have a minimum capacity of 15 gallons.
_____	_____	The tank shall be pressurized to provide diesel fuel for flushing out emulsion hoses and the nozzle assembly. A pressure relief valve shall be included.
EMULSION TANK:		
_____	_____	The minimum capacity of the tank shall be 250 gallons.
_____	_____	Tank shall have a fill hole of 8" I.D. (min.) with steel cover.

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
EMULSION TANK (Continued):		
_____	_____	The tank shall withstand 200 PSI working pressure at 500°F with a pressure relief valve.
_____	_____	The emulsion shall be heated by thermostatically controlled 120 volt heating blankets or heating elements providing 3000 watt (minimum) heating.
_____	_____	Dial or digital type temperature gauges shall be mounted on the unit for the emulsion.
_____	_____	The entire tank and piping shall be fully insulated with R-15 rated insulation covered by a weatherproof cover that is fire retardant.
COMPRESSOR AND BLOWER:		
_____	_____	The air compressor shall be heavy duty with the capability to produce 15 CFM. Compressor shall include a governor regulator valve.
_____	_____	The air blower shall be capable of producing 450 CFM and include an air relief valve.
_____	_____	The air compressor and air blower shall be direct drive from the engine (no belts).
HOSES AND NOZZLE:		
_____	_____	The aggregate hose shall be a minimum of 25 feet long and 3 1/2" I.D. It shall be a non-kinking, reinforced rubber neoprene lined hose.
_____	_____	The emulsion hose shall be long enough as not to restrict the range of the nozzle. It shall be a flexible 3/8" I.D. hose with 250 PSI rated.
_____	_____	There shall be a means of controlling the flow of air, emulsion, and aggregate from a single location near the nozzle.

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
HOSES AND NOZZLE: (Continued):		
_____	_____	The nozzle shall be designed to relieve air pressure when aggregate exits nozzle allowing the operator to patch close to traffic or other obstructions without over-spray.
_____	_____	The nozzle assembly shall disperse emulsion using a spray slot for 100% coating of the aggregate.
_____	_____	Emulsion lines and nozzle shall be heated by circulating transfer fluid and fully insulated from the asphalt emulsion tank to the spray nozzle.
_____	_____	Swing type boom arm shall be located on the rear of the unit to support the applicator hose during operation. The unit shall have a method of securing this boom arm to the unit during transportation.
ENGINE:		
_____	_____	The power to operate the unit shall be provided by a liquid cooled, diesel fueled engine with at least 74 HP. Engine to be current emission compliant meeting EPA requirements for new production machines at the time of bid.
_____	_____	The radiator shall contain extended life antifreeze to minus 30° F. protection.
_____	_____	The engine shall be enclosed to suppress engine noise and provide protection from the weather. It shall not be necessary to remove the cover to operate the unit or to perform routine preventative maintenance on the engine.
_____	_____	Engine shall be equipped with manufacturer's standard accessories to include 12 volt electric starting and charging system, hour meter, replaceable dry-element air cleaner and muffler as a minimum.
_____	_____	The unit shall have a diesel fuel tank capacity of 15 gallons, minimum, for the engine. Tank shall be equipped with a fuel gauge.

<u>MFG. CODE</u>	<u>EXCEPTIONS TO SPECIFICATION</u>	<u>SPECIFICATION</u>
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OPERATOR'S VIDEO TRAINING:

_____	_____	A video tape or disc demonstrating safety features, start-up, operation, and the shut-down procedure shall be supplied. If a tape is provided, it shall be on VHS format and KDOT will reserve the right to make copies for agency use as it is deemed necessary.
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DEMONSTRATION OPTION:

_____	_____	KDOT reserves the right to require a successful demonstration before award is made.
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